

reduced. The other method, as was mentioned, is by forcible extrusion.

If the midrib of the papaya plant is pierced with a needle, a large drop of sap is instantly forced out of the puncture by pressure within the plant. This sap is very different in appearance from the honey-dew which appears at the tip of the abdomen of the membracids, being whitish and milky. Within a few minutes it coagulates or congeals to form a soft, white, starch-like ball. Certainly, feeding by the nymphs must be effortless, with unlimited food supplied and that under pressure. In fact, the life of this membracid, from egg to death, is one of idyllic indolence. No movement is necessary excepting that of crawling out of the egg shell, attaching the mouth-parts once and for all to a never-ending food supply, upending the abdomen (when caressed) for the automatic removal of excrement, shedding the old clothes (with new ones already present beneath!), and mating. Females, "the over-worked sex," have only the additional labor of laying eggs in the tissues of the plant.

### A NEW SPIDER MITE

(ACARINA, TETRANYCHIDAE)

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This paper contains the description of a new tetranychid mite from Arizona. The type material is deposited in the U. S. National Museum, Washington, D. C.

#### *Tetranychus frosti*, new species

*Female*.—Dorsum of abdomen with striations mostly transverse (the "*Eotetranychus*" type). Twenty-six dorsal body setae, well developed, linear lanceolate, distinctly setose, not arising from tubercles. A perfect and an imperfect eye cornea each side. Legs shorter than body to front of cephalothorax. Tarsus I with two sets of duplex setae, these proximate, longest seta almost as long as segment; 6 (occasionally 7) setae proximad of proximal set of duplex setae; segment abruptly constricted distad of duplex setae. Relative length of segments of leg I as follows: Coxa,  $14\pm$ ; trochanter, 10; femur,  $24$ ; patella, 12; tibia, 16; tarsus, 23. Mandibular plate barely indented anteriorly. Claw of tarsus I deeply cleft into six rather delicate divisions, these appressed right and left. Palp-tarsus with basal thickness distinctly greater than axial length; terminal sensilla somewhat longer than thick; dorsal sensilla very slender. Collar trachea consisting of a straightish tube, terminating internally in a few thickened septa, the last at times forming a very short, reflexed arm.

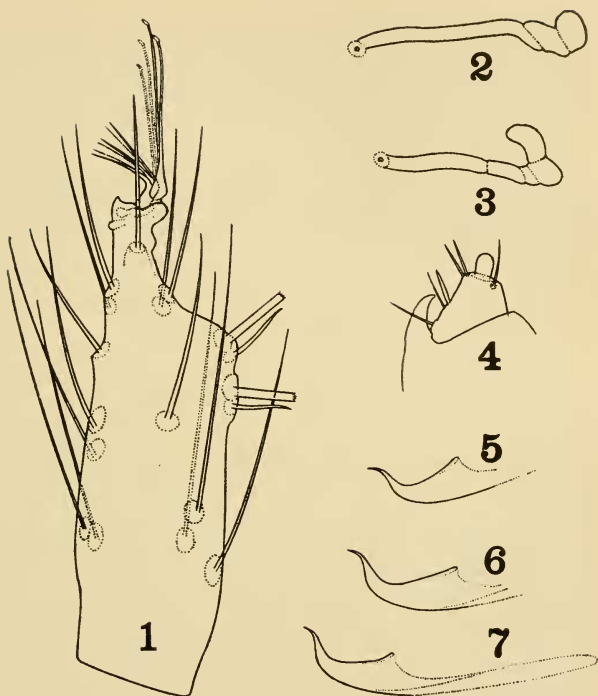


Fig. 1, tarsus I of female, of *Tetranychus frosti*, lateral view; figs. 2 and 3, collar trachea; fig. 4, tip of palpus of female, lateral view; figs. 5, 6 and 7, aedeagus, lateral view.

*Male*.—Much smaller than female, body from above rather narrowly elliptical. Legs somewhat shorter than usual for males, all shorter than body. Tarsus I with two somewhat swollen (sensory ?) setae near base. Palpus with hornlike spur on second segment; palp-tarsus with terminal sensilla much reduced, conelike. Aedeagus with inner lobe rodlike, expanding dorso-caudad to the right-angled basilar lobe; shaft convex ventrally, narrowing caudad, bending upward about  $60^{\circ}$  from general axis of aedeagus to form the hook element; the latter about two-thirds as long as shaft; the hook tapering to a rather sharp tip, which is weakly deflexed.

*Type locality*.—Tempe, Arizona.

*Type material*.—U. S. N. M. no. 1928. Collected by Marvin H. Frost, May 12, 1949. In addition to the 12 ♀ and 3 ♂ type specimens, there are present on the slide 5 females of another species of *Tetranychus* which could not be identified.

*Distribution*.—Known only from the type locality.

*Food plant*.—Rose bush.

The present species constitutes one of the rarely known cases where the structure of the aedeagus strongly resembles that of a species in a different genus. The portion of it caudad of the basilar lobe is very similar to that of *Paratetranychus pilosus* (C. & F.).

#### ADDITIONS TO THE HISTORY OF MEIGEN 1800

(DIPTERA)

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In 1944 (Ann. Mag. Nat. Hist., ser. 11, 11: 261-272), Dr. John Smart presented a very useful compendium of the literature and events relating to the long disputed "Nouvelle classification" of Diptera by Meigen, 1800. He listed eight published references to Meigen's generally overlooked paper prior to its so-called rediscovery in 1908, when Hendel reprinted the taxonomic portion and indicated considerable synonymy. The writer has recently found several other pre-1908 references which should be added to Smart's historical review.

Cuvier (1817, "Le Règne Animal," vol. 4, p. 141), in a list of literature by Meigen: "M. Baumbauer avait publié, en 1800, un extrait du même travail, sous le titre de: 'Nouvelle classification des Mouches à deux ailes,' in-8°, Paris, 1800." It is possible that this note also appeared in other editions of Cuvier's work, which would add a few references.

Duméril (1823, "Considérations générales sur la classe des insectes," p. 265), in a discussion of Meigen: "M. Baumhauer avoit donné à Paris, en l'an VIII (1800), un extrait de ce travail en françois." The "travail" referred to was published by Meigen (1804).

Sherborn (1902, "Index animalium, 1758-1800"): All Meigen 1800 names are listed.

Hoyle (1902, Jour. Conchology 10: 214; paper read before the Conchological Society, June 11, 1902): *Antiopella* proposed to replace *Antiopa* Alder and Hancock (1848) in the Nudibranchia, because "the generic name *Antiopa* seems to have been used for Diptera by Meigen in 1800."

Hendel (1903, Wien. Ent. Ztg. 22: 58): In reviewing a paper by Bezzi (1902), Hendel called attention to the existence of the generic